

BLANK PAGE



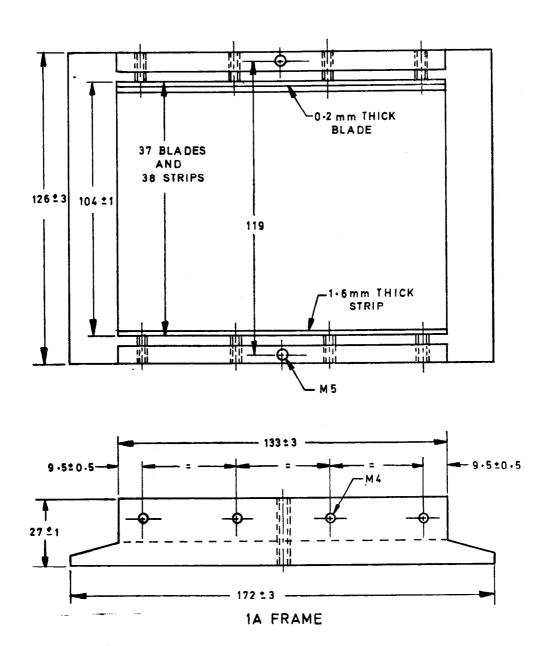
Indian Standard

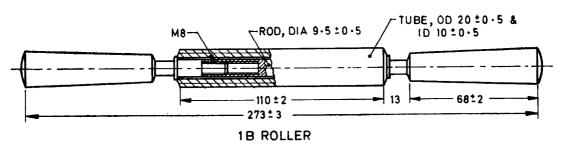
SPECIFICATION FOR SKIN GRAFT EXPANDER

- 1. Scope Specifies dimensional and other requirements of skin graft expander used in expansion of skin in the management of plastic surgery.
- 2. Shape and Dimensions As shown in Fig. 1 and 2.
- 3. Material
- 3.1 Blade High carbon low alloy steel conforming to designation 120Cr35 of IS: 7226-1974 'Specification for cold-rolled medium high carbon and low alloy steel strip for general engineering purposes' or high carbon steel with the following composition:

Carbon	1'20 to 1'30 percent
Manganese	0.20 to 0.45 percent
Silicon	0'10 to 0'35 percent
Phosphorus	0.035 percent, Max
Sulphur	0°025 percent, <i>Max</i>

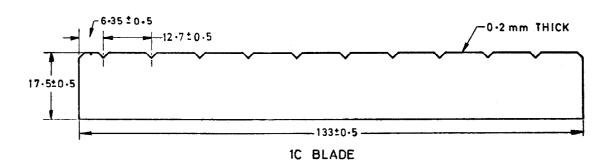
- 3.2 Body Aluminium alloy conforming to IS: 737-1974 'Specification for wrought aluminium and aluminium alloys, plate (for general engineeing purposes) (second revision)'.
- 3.3 Screws Stainless steel.
- 4. Hardness The blades shall be hardened and tempered to 700-800 HV.
- 5. Manufacture, Workmanship and Finish All components shall be assembled in the compact form so as to make a composite unit.
- **5.1** The blades shall be sharpened along the entire length with V groove as shown in Fig. 1 and 2. The cutting edge shall have an angle of $16\pm1^\circ$. The blade shall be perfectly straight with respect to its cutting edges. The cutting edge shall be uniform throughout, surgically sharp and free from feathers, nicks, high spots and waviness.
- 5.2 The assembled unit shall have a plate to cover the edges of the blades with spring loaded bolts or any other clamping arrangement for holding the cover plate. The entire unit shall be highly polished and free from any blemishes. All edges except the cutting edges shall be rounded.
- 5.3 A bar with a cylindrical roller suiting to the width of the instrument and made of polyester fibre shall be provided for expanding the skin by rolling it over the blades.
- 6. Tests
- **6.1** Performance Test A sheet of ordinary typing paper shall be kept on the top of the blades. The sheet of paper shall be pressed and rolled by the roller manually. The paper sheet then shall be taken out and examined whether it has expanded and formed diamond shaped mesh.
- 7. Marking
- 7.1 Each unit shall be legibly and indelibly marked with the manufacturer's name, initials or recognized trade-mark.
- 7.2 Certification Marking Details available with the Bureau of Indian Standards.
- 8. Packing The blades of the skin graft expander shall be suitably lubricated in order to avoid corrosion. The whole instrument may be packed as agreed to between the purchaser and the supplier.
- 9. Sampling Sampling procedure and acceptance criteria for conformity shall be as agreed to between the purchaser and the supplier. A recommended scheme for the same is given in Appendix A.

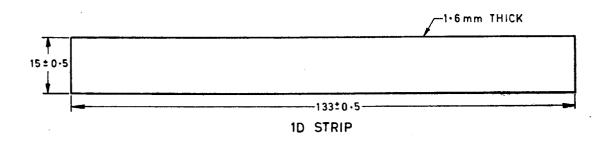


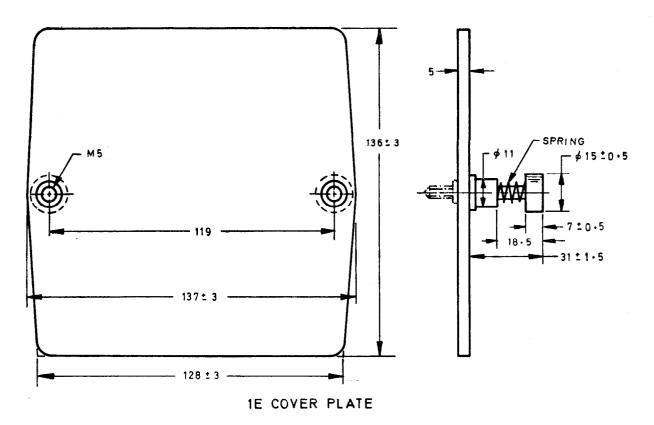


All dimensions in millimetres.

FIG. 1 SKIN GRAFT EXPANDER, COMPONENT PARTS, STANDARD SIZE - Contd.

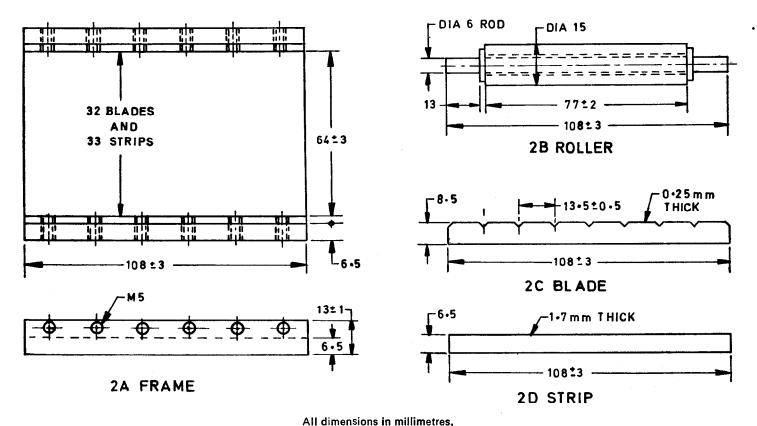






All dimensions in millimetres.

FIG. 1 SKIN GRAFT EXPANDER, COMPONENT PARTS, STANDARD SIZE



An unicipototo in minimicios,

FIG. 2 SKIN GRAFT EXPANDER, COMPONENT PARTS SMALL SIZE

IS: 12103 - 1987

APPENDIX A

(Clause 9)

SAMPLING PLAN AND CRITERIA FOR CONFORMITY

A-1. Lot

A-1.1 In a consignment, all the expanders of the same pattern and dimensions shall be grouped together to constitute a lot not exceeding 50 items. Each lot shall be tested for the requirements of this specification.

A-2. Scale of Sampling and Criteria for Conformity

- A-2.1 Eight expanders shall be selected at random from each lot by using random number tables (See IS: 4905-1968 Methods for random sampling). Each expander in the sample shall be individually tested for the requirements of shape and dimensions (2), material (3), workmanship and finish (5), and marking (7). Any expander failing to meet one or more of the above requirements shall be termed defective. No defective expander in the sample shall be permitted, if the lot is to be accepted under this clause.
- A-2.2 The lot which has been found satisfactory according to A-2.1 shall be tested for hardness (4), and performance test (6). For this purpose, one expander shall be sampled at random and tested for the above requirements. If need be, more expander may be drawn for conducting the relevant tests.
 - A-2.2.1 No failure shall occur, if the lot is to be declared acceptable under this clause.